## REMARKS

The Applicant respectfully requests further examination and reconsideration in view of the amendments above and the arguments set forth fully below. Claims 1-7, 9-15, 17-23, 25-29, 31 and 32 were previously pending in this application. Within the Office Action, Claims 1-7, 9-15, 17-23, 25-29, 31 and 32 have been rejected. By the above amendment, Claims 1, 9, 17, 25, 31 and 32 have been amended. Accordingly, Claims 1-7, 9-15, 17-23, 25-29, 31 and 32 are currently pending.

### Rejections under 35 U.S.C. § 103

Within the Office Action, Claims 1-7, 9-15, 17-23, 25-29, 31 and 32 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,778,367 to Wesinger Jr. et al. ("Wesinger") in view of U.S. Patent No. 5,613,110 to Stuart ("Stuart"). The applicant respectfully disagrees.

Wesinger teaches an automated on-line information service and directory, particularly for the world wide web. Wesinger teaches that a computer network and a database are used to provide a hardware-independent, dynamic information system in which the information content is entirely user-controlled. [Wesinger, Abstract] When accessing the database, Wesinger teaches that the user is given the options of searching the database, adding a new entry, updating an existing entry, changing the user's password or logging in. [Wesinger, col. 5, lines 23-25] Wesinger further teaches that when the user selects the Search option, the user is allowed to select between different searching methods, including searching by Categories (going through a categories list), by Example (querying each field of the entries), and by Keyword (specifying a keyword). [Wesinger, col. 5, lines 30-40, Figure 2H] Wesinger does not teach that each utilization of the search module includes the availability of all types of available searches at any location, including at any displayed page, within the database.

As recognized within the Office Action, Wesinger does not teach a dichotomous key search. Wesinger does not teach performing a search in which for any given searching step, at any location within the database, four different search methodologies are available to be used to perform the search. Specifically, Wesinger does not teach that any of a keyword search, hierarchical search, dichotomous key search and parametric search can be used at any location within the database. Wesinger only teaches searching the entire database, but not limiting the search to a segment or sub-segment of the database.

Within the Response to Arguments section it is stated

> [r]eferring to Fig. 2H, col. 5, lines 30-40, Wesinger teaches that the system allows the user move quickly within the WebBook by selecting different search options including go to the main page. The main page includes different search options. Therefore, at any location within the searchable database, the user can go back to the search option page and selects another option. [Office Action, page 6]

This argument does not represent that each search option is available at any location, including at any displayed page, within the database. This argument provided within the Office Action, represents that the search options are *only* available at the main page, not at any location, including at any displayed page, within the database.

Stuart teaches an indexing method and apparatus facilitating a binary search of digital data. Stuart teaches that an ordered index file is created for archived report data wherein each index file contains a series of 4-byte offsets into the report data. [Stuart, Abstract] Stuart also teaches that upon later retrieval from the report data, a binary search is performed for a key(s) that is contained in a search query, using the index field offsets to determine the order in which to retrieve the report data fields. [Stuart, Abstract] According to the teachings of Stuart, the binary search resolves each key in the search query to a range of index offsets corresponding to report rows that match the query. [Stuart, Abstract] This binary search is not a dichotomous key search, as taught and claimed in the present invention.

Stuart also does not teach performing a search in which for any given searching step, at any location, including at any displayed page, within the database, four different search methodologies are available to be used to perform the search. There is no motivation to warrant the combination of Wesinger and Stuart. There is no hint, teaching or suggestion in either of Wesinger or Stuart to warrant their combination.

This is a classic case of impermissibly using hindsight to make a rejection based on obviousness. The Court of Appeals for the Federal Circuit has stated that "it is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious." In Re Fritch, 972 F.2d, 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992). As discussed above, Wesinger and Stuart do not teach performing a search in which for any given searching step, at any location, including at any displayed page, within the database, four different search methodologies are available to be used to perform the search, as claimed. As recognized within the Office Action, Wesinger does not

teach a dichotomous key search. Stuart teaches utilizing a binary search, but not a dichotomous key search, as taught and claimed by the present invention. Within the Office Action, it is stated that

> [i]t would have been obvious to one with ordinary skill in the art at the time the invention was made to apply the teaching of Stuart into the invention of Wesinger because Wesinger suggested that multiple search methods are available for user and the combination would reduce the memory access when using binary search, and providing user more search methodologies. [Office Action, page 4]

It is only with the benefit of the present claims, as a "template" that there is any motivation to combine the binary search of Stuart with the automated on-line information service of Wesinger. No such motivation can be found in the teachings of either of the references. Wesinger does teach utilizing different search methods, but not a dichotomous key method, which was available at the time of the filing of Wesinger. To conclude that the combination of Wesinger and Stuart is obvious, based on the teachings of these references, is to use hindsight based on the teachings of the present invention and to read much more into Wesinger and Stuart than their actual teachings. This is simply not permissible based on the directive from the Court of Appeals for the Federal Circuit.

It is well settled that to establish a *prima facie* case of obviousness, three basic criteria must be met:

1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;

2) there must be a reasonable expectation of success; and

3) the prior art reference, or references, must teach or suggest all the claim limitations. MPEP § 2143.

The burden of establishing a *prima facie* case of obviousness based on the teachings of Wesinger and Stuart has not been met within the Office Action.

There is no motivation to combine the teachings of Stuart with Wesinger. Stuart teaches facilitating a binary search of digital data. Stuart is only cited because it teaches a binary search. There is no hint, teaching or suggestion in either Stuart or Wesinger to motivate one skilled in the art to combine their teachings. It is only with the benefit of the presently claimed invention as a

"template" that one would consider combining the binary search of Stuart with the automated on-line information service of Wesinger.

Even if considered proper, the combination of Wesinger and Stuart does not teach performing a search in which for any given searching step, at any location, including at any displayed page, within the database, four different search methodologies are available to be used to perform the search. Neither, Wesinger, Stuart nor their combination teach that each utilization of the search module includes the availability of the keyword search, the hierarchical search, the dichotomous key search and the parametric search.

In contrast to the teachings of Wesinger and Stuart, the method of and apparatus for performing a research task of the present invention, interchangeably utilizes a multitude of search methodologies. Specifically, utilizing a search module, a user is able to selectively utilize one or more search methodologies including keyword search, hierarchical search, dichotomous key search and parametric search to correlate a search criteria to a searchable database for generating one or more matching items. It is further taught within the present specification that

> [a]t each node within the tree, the user is presented with the option of using any one or combinations of the four search methodologies utilized by the research system. The four search methodologies are keyword search, hierarchical tree search, dichotomous key search, and parametric search. Regardless as to which search methodology or search methodologies are used to reach a particular node, the user can utilize any of the four search methodologies to further refine the search and move further down the directory tree structure. The user may also navigate back up the directory tree structure to a higher node, and once again have the option to use any of the four search methodologies to refine the search from the current node and move further down the directory tree structure.
> [Present Specification, page 43, lines 6-15].

Therefore, a user is able to navigate the directory tree structure, utilizing any one of the four search methodologies in any combination to reach the desired result. As discussed above, neither Wesinger, Stuart nor their combination teach that each utilization of the search module includes the availability of the keyword search, the hierarchical search, the dichotomous key search and the parametric search at any location within the database. As discussed above, Wesinger teaches that search options are *only* available at the main page, not at any location, including at any displayed page, within the database.

Each of the pending independent claims include the limitation specifying that *each utilization of the research module includes availability of each search at any location, including*

*at any displayed page, within the searchable database.* As described above, the combination of Wesinger and Stuart is not proper. As further discussed above, even if considered proper, neither Wesinger, Stuart nor their combination teach that utilizing the research module, each of the search methodologies are available at any location, including at any displayed page, within the database. As discussed above, Wesinger teaches that search options are *only* available at the main page, not at any location, including at any displayed page, within the database. Each of the pending independent claims also specify that the keyword search, the hierarchical search, the dichotomous key search, and the parametric search are available at any displayed page within the searchable database without requiring user input. As discussed above, Wesinger requires the user to select to go back to the main page to begin a search. Accordingly, Wesinger does not teach that the keyword search, the hierarchical search, the dichotomous key search, and the parametric search are available at any displayed page within the searchable database without requiring user input.

When a user of the system taught by Wesinger returns to the main page to execute the search, their only option is to begin a new search and search the entire database. Wesinger does not allow a user to limit the search to a segment or a sub-segment of the database. In contrast, the present system allows a user to utilize any of the available search methodologies at any location, including at any displayed page, within the searchable database. This allows a user to limit their search to a segment or sub-segment of a database. This also allows a user the flexibility to further refine an existing search from a current node, page or other location, within the database, without requiring the search of the entire database. This further refinement of an existing search is not possible within the system by Wesinger.

The independent Claim 1 is directed to a method of accessing data within a research system by an application external to the electronic system. The method comprises formatting a searchable database within the research system into a directory tree structure, wherein the directory tree structure includes nodes comprising related data and branches comprising links between the nodes, wherein each related item of data is categorized by a navigation path through the directory tree structure and by one or more parameters, each parameter is set with a corresponding value associated with the data item thereby forming a set parameter, wherein the parameters are specific to the node in which the related data is included, and an external application different than the research system accessing one or more nodes within the directory tree structure and obtaining data from the one or more nodes by utilizing an applications programming interface (API) associated with the research system, wherein the external

application formats a query language string using the API such that the formatted query language string is used directly by the research system to access the directory tree structure and obtain data from the searchable database specified by the query language string, further wherein the query language string is a command string written according to a query language, wherein accessing one or more nodes is performed utilizing a research module, further wherein the research module includes a keyword search, a hierarchical search, *a dichotomous key search* and a parametric search, and further wherein *each utilization of the research module includes availability of each search at any location, including at any displayed page, within the searchable database, wherein the keyword search, the hierarchical search, the dichotomous key search, and the parametric search are available at any displayed page within the searchable database without requiring user input.* As discussed above, the combination of Wesinger and Stuart is not proper. As also discussed above, neither Wesinger, Stuart nor their combination teach that each utilization of the research module includes availability of each search at any location, including at any displayed page, within the searchable database. As also discussed above, neither Wesinger, Stuart nor their combination teach that the keyword search, the hierarchical search, the dichotomous key search, and the parametric search are available at any displayed page within the searchable database without requiring user input. As discussed above, Wesinger requires the user to select to go back to the main page to begin a search. For at least these reasons, the independent Claim 1 is allowable over Wesinger, Stuart and their combination.

Claims 2-7 depend on the independent Claim 1. As described above, the independent Claim 1 is allowable over Wesinger, Stuart and their combination. Accordingly, Claims 2-7 are all also allowable as being dependent on an allowable base claim.

The independent Claim 9 is directed to research system for providing access to a searchable database by an application external to the research system. The research system comprises means for formatting the searchable database into a directory tree structure, wherein the directory tree structure includes nodes comprising related data and branches comprising links between the nodes, wherein each related item of data is categorized by a navigation path through the directory tree structure and by one or more parameters, each parameter is set with a corresponding value associated with the data item thereby forming a set parameter, wherein the parameters are specific to the node in which the related data is included, and means for an external application different than the research system accessing one or more nodes within the directory tree structure and obtaining data from the one or more nodes by utilizing an applications programming interface (API) associated with the research system, wherein the

external application formats a query language string using the API such that the formatted query language string is used directly by the research system to access the directory tree structure and obtain data from the searchable database specified by the query language string, further wherein the query language string is a command string written according to a query language, wherein the means for accessing one or more nodes utilizes a research module, further wherein the research module includes a keyword search, a hierarchical search, a *dichotomous key search* and a parametric search, and further wherein *each utilization of the research module includes availability of each search at any location, including at any displayed page, within the searchable database, wherein the keyword search, the hierarchical search, the dichotomous key search, and the parametric search are available at any displayed page within the searchable database without requiring user input.* As discussed above, the combination of Wesinger and Stuart is not proper. As also discussed above, neither Wesinger, Stuart nor their combination teach that each utilization of the research module includes availability of each search at any location, including at any displayed page, within the searchable database. As also discussed above, neither Wesinger, Stuart nor their combination teach that the keyword search, the hierarchical search, the dichotomous key search, and the parametric search are available at any displayed page within the searchable database without requiring user input. As discussed above, Wesinger requires the user to select to go back to the main page to begin a search. For at least these reasons, the independent Claim 9 is allowable over Wesinger, Stuart and their combination.

Claims 10-15 depend on the independent Claim 9. As described above, the independent Claim 9 is allowable over Wesinger, Stuart and their combination. Accordingly, Claims 10-15 are all also allowable as being dependent on an allowable base claim.

The independent Claim 17 is directed to research system for providing access to a searchable database by an application external to the research system. The research system comprises a research server configured to format the searchable database into a directory tree structure, wherein the directory tree structure includes nodes comprising related data and branches comprising links between the nodes, wherein each related item of data is categorized by a navigation path through the directory tree structure and by one or more parameters, each parameter is set with a corresponding value associated with the data item thereby forming a set parameter, wherein the parameters are specific to the node in which the related data is included, and an external application different than the research system to access one or more nodes within the directory tree structure and to obtain data from the one or more nodes by utilizing an applications programming interface (API) associated with the research system, wherein the

external application formats a query language string using the API such that the formatted query language string is used directly by the research system to access the directory tree structure and obtain data from the searchable database specified by the query language string, further wherein the query language string is a command string written according to a query language, wherein the research server accesses the one or more nodes by utilizing a research module, further wherein the research module includes a keyword search, a hierarchical search, a *dichotomous key search* and a parametric search, and further wherein *each utilization of the research module includes availability of each search at any location, including at any displayed page, within the searchable database, wherein the keyword search, the hierarchical search, the dichotomous key search, and the parametric search are available at any displayed page within the searchable database without requiring user input.* As discussed above, the combination of Wesinger and Stuart is not proper. As also discussed above, neither Wesinger, Stuart nor their combination teach that each utilization of the research module includes availability of each search at any location, including at any displayed page, within the searchable database. As also discussed above, neither Wesinger, Stuart nor their combination teach that the keyword search, the hierarchical search, the dichotomous key search, and the parametric search are available at any displayed page within the searchable database without requiring user input. As discussed above, Wesinger requires the user to select to go back to the main page to begin a search. For at least these reasons, the independent Claim 17 is allowable over Wesinger, Stuart and their combination.

Claims 18-23 depend on the independent Claim 17. As described above, the independent Claim 17 is allowable over Wesinger, Stuart and their combination. Accordingly, Claims 18-23 are all also allowable as being dependent on an allowable base claim.

The independent Claim 25 is directed to network of devices for providing access to a searchable database by an application external to the research system. The network of devices comprises one or more computer systems configured to establish a connection with other systems, and a research server coupled to the one or more computer systems to format the searchable database into a directory tree structure, wherein the directory tree structure includes nodes comprising related data and branches comprising links between the nodes, wherein each related item of data is categorized by a navigation path through the directory tree structure and by one or more parameters, each parameter is set with a corresponding value associated with the data item thereby forming a set parameter, wherein the parameters are specific to the node in which the related data is included, and an external application different than the research system

to access one or more nodes within the directory tree structure and to obtain data from the one or more nodes by utilizing an applications programming interface (API) associated with the research system, wherein the external application formats a query language string using the API such that the formatted query language string is used directly by the research system to access the directory tree structure and obtain data from the searchable database specified by the query language string, further wherein the query language string is a command string written according to a query language, wherein the research server accesses the one or more nodes by utilizing a research module, further wherein the research module includes a keyword search, a hierarchical search, a *dichotomous key search* and a parametric search, and further wherein *each utilization of the research module includes availability of each search at any location, including at any displayed page, within the searchable database, wherein the keyword search, the hierarchical search, the dichotomous key search, and the parametric search are available at any displayed page within the searchable database without requiring user input.* As discussed above, the combination of Wesinger and Stuart is not proper. As also discussed above, neither Wesinger, Stuart nor their combination teach that each utilization of the research module includes availability of each search at any location, including at any displayed page, within the searchable database. As also discussed above, neither Wesinger, Stuart nor their combination teach that the keyword search, the hierarchical search, the dichotomous key search, and the parametric search are available at any displayed page within the searchable database without requiring user input. As discussed above, Wesinger requires the user to select to go back to the main page to begin a search. For at least these reasons, the independent Claim 25 is allowable over Wesinger, Stuart and their combination.

Claims 26-29 depend on the independent Claim 25. As described above, the independent Claim 25 is allowable over Wesinger, Stuart and their combination. Accordingly, Claims 26-29 are all also allowable as being dependent on an allowable base claim.

The independent Claim 31 is directed to a method of accessing data within a research system by an application external to the research system. The method comprises formatting a searchable database within the research system into a directory tree structure, wherein the directory tree structure includes nodes comprising related data and branches comprising links between the nodes, wherein each related item of data is categorized by a navigation path through the directory tree structure and by one or more parameters, each parameter is set with a corresponding value associated with the data item thereby forming a set parameter, wherein the parameters are specific to the node in which the related data is included, and an external

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application different than the research system accessing one or more nodes within the directory tree structure and obtaining data from the one or more nodes by utilizing an applications programming interface (API) associated with the research system, wherein the applications programming interface accesses the one or more nodes within the directory tree structure using a query language string, further wherein the query language string is a command string written according to a query language that defines a navigation path through the directory tree structure to access a specific node within the directory tree structure, wherein accessing one or more nodes is performed utilizing a research module, further wherein the research module includes a keyword search, a hierarchical search, a *dichotomous key search* and a parametric search, and further wherein *each utilization of the research module includes availability of each search at any location, including at any displayed page, within the searchable database, wherein the keyword search, the hierarchical search, the dichotomous key search, and the parametric search are available at any displayed page within the searchable database without requiring user input.* As discussed above, the combination of Wesinger and Stuart is not proper. As also discussed above, neither Wesinger, Stuart nor their combination teach that each utilization of the research module includes availability of each search at any location, including at any displayed page, within the searchable database. As also discussed above, neither Wesinger, Stuart nor their combination teach that the keyword search, the hierarchical search, the dichotomous key search, and the parametric search are available at any displayed page within the searchable database without requiring user input. As discussed above, Wesinger requires the user to select to go back to the main page to begin a search. For at least these reasons, the independent Claim 31 is allowable over Wesinger, Stuart and their combination.

The independent Claim 32 is directed to a method of accessing data within a research system by an application external to the research system. The method comprises formatting a searchable database within the electronic system into a directory tree structure, wherein the directory tree structure includes nodes comprising related data and branches comprising links between the nodes, wherein each related item of data is categorized by a navigation path through the directory tree structure and by one or more parameters, each parameter is set with a corresponding value associated with the data item thereby forming a set parameter, wherein the parameters are specific to the node in which the related data is included, and an external application different than the research system accessing one or more nodes within the directory tree structure and obtaining data from the one or more nodes by utilizing an applications programming interface (API) associated with the research system, wherein accessing one or more

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nodes is performed utilizing a research module, the research module includes a keyword search, a hierarchical search, a dichotomous key search, and a parametric search and further wherein *each utilization of the research module includes availability of each search at any location, including at any displayed page, within the searchable database, wherein the keyword search, the hierarchical search, the dichotomous key search, and the parametric search are available at any displayed page within the searchable database without requiring user input.* As discussed above, the combination of Wesinger and Stuart is not proper. As also discussed above, neither Wesinger, Stuart nor their combination teach that each utilization of the research module includes availability of each search at any location, including at any displayed page, within the searchable database. As also discussed above, neither Wesinger, Stuart nor their combination teach that the keyword search, the hierarchical search, the dichotomous key search, and the parametric search are available at any displayed page within the searchable database without requiring user input. As discussed above, Wesinger requires the user to select to go back to the main page to begin a search. For at least these reasons, the independent Claim 32 is allowable over Wesinger, Stuart and their combination.

For the reasons given above, Applicant respectfully submits that claims 1-7, 9-15, 17-23, 25-29, 31 and 32 are now in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, she is encouraged to call the undersigned attorney at (408) 530-9700.

Respectfully submitted,
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